Draft Charter Document - Process to Develop a Delta Nutrient Management Strategy

Straw Proposal – September 1, 2014

1.0 Introduction and Purpose of Document

The Central Valley Regional Water Quality Control Board (Central Valley Water Board) has initiated a process to develop a nutrient management strategy that will define and guide the scientific research planning efforts and appropriate policy determinations for nutrient management in surface waters of the Sacramento-San Joaquin Delta. Staff envisions that, if needed, nutrient objectives (either narrative or numeric) and an implementation plan would be adopted as amendments to the Sacramento-San Joaquin Basin Plan.

The purpose of this document is to: 1) establish goals and objectives and guiding principles for the stakeholder-based process, 2) describe the stakeholder-based process that the Central Valley Water Board will follow, including roles and responsibilities of participants in the process, 3) identify the nutrient-related concerns that exist in the Delta that require examination and 4) describe the technical work elements that the Central Valley Water Board has initiated to address several of these concerns.

2.0 Goals and Objectives

The overarching goal is to develop a framework that will lead to effective nutrient management decisions and actions to achieve reasonable protection of beneficial uses. The following describes the specific goals and objectives for the process:

- Implement a transparent process that provides for robust stakeholder input, effective decision making, and independent peer review of science and policy determinations.
- Take scientifically defensible steps to develop a Delta nutrient management strategy that will provide reasonable protection of beneficial uses through the development of attainable management goals.
- Fulfill the requirements of the California Water Code and address State and Federal anti-degradation policies.

3.0 Guiding Principles

The following guiding principles define the intentions and expectations of the participants leading, serving, and associated with the Delta nutrient management strategy process:

- The nutrient management strategy process (including the scientific research planning and related policy development) shall be performed in an open, transparent and efficient manner. The process shall support the appropriate involvement of all stakeholders affected by, and interested in, nutrient conditions in the waters of the Delta. Excessive and time consuming "process" shall be minimized, with a focus on efficient work between affected stakeholders and technical specialists. Ground rules and governance documents will be adopted and used in the process to encourage clarity of purpose and effective collaboration.

- The nutrient management strategy effort shall focus on the surface waters of the Sacramento-San Joaquin Delta. Wherever possible, elements of the process shall be consistent with and capitalize on ongoing and future efforts in other California nutrient management processes for San Francisco Bay, Coastal Estuaries, and the Sacramento-San Joaquin Delta. Leveraging of resources shall be a priority. Efforts will be made to communicate transparently and proactively with other stakeholder and technical activities in the Bay-Delta region to ensure efficiency and minimize overlaps and duplications with other efforts.
- A focus of the process shall be to provide an avenue and incentives for development and implementation of nutrient management plans to achieve effective, attainable outcomes at the watershed scale that address identified concerns. Information and tools shall be developed to support clear definition of concerns, identification of alternative hypotheses, assessment of a range of management alternatives, and establishment of effective implementation plans based on an understanding of management capabilities and resultant benefits.
- Effort shall be made to develop credible, feasible, scientific recommendations for the Sacramento-San Joaquin Delta and associated waterways that are created through collaborative discussions representing multiple interests.
- Appropriate and effective modeling tools are recognized to be a necessity for the Delta nutrient management effort. Such tools must be selected/developed to enable understanding of nutrient dynamics and effects, the role of other factors and environmental variables in nutrient-related concerns, prediction of the effectiveness of various management scenarios, and development of sound policy determinations.
- Technical subcommittees may be formed by the Stakeholder & Technical Advisory Group (STAG) to provide advice to the Central Valley Water Board charged with development of the technical information supporting the proposed nutrient management strategies.
- Independent peer review will be sought throughout the process including review of the science supporting the final nutrient management proposals and associated implementation.
- The process shall remain adaptable and flexible to address advances in scientific understanding.
- Significant time and funding is needed to support the above described process. Participants are committed to work together to secure adequate funding and to allocate adequate time for the process to be completed.

4.0 Process Description

The Delta nutrient management strategy development process shall consist of the following elements:

- Central Valley Water Board staff
- Stakeholder and Technical Advisory Group (STAG)
- Science Work Group
- Facilitator
- Independent Science Review Panel

It is agreed that the process will operate under a consensus seeking paradigm, based on principles of "consensus with accountability." Consensus with accountability requires all participants to try to reach

consensus while at all times supporting and expressing their self-interest. In the event a participant rejects a proposal, then that participant is expected to provide a counter proposal that attempts to achieve their interest and the interests of the other participants.

In seeking consensus on an interim or final recommendation, participants shall voice their opinions with specific proposals along the way, rather than waiting until a final recommendation has been developed. At all times, participants shall ensure that they are providing input to represent their prescribed role and constituency.

The Ground Rules and Governance documents that will be created by the STAG will provide the process to be followed when a consensus cannot be reached.

The roles and responsibilities of parties involved in the process are as follows:

Central Valley Water Board and staff: Staff will be responsible for carrying out tasks outlined in the 2014 Delta Strategic Work Plan under the nutrient study plan, maintaining the integrity of the stakeholder process, and ensuring active information sharing to enable stakeholder review and input of key documents produced within the process. Staff will be responsible for making recommendations to the Central Valley Water Board on research needs, research study results, and nutrient management strategies after considering input from the STAG, Science Work Groups, and Independent Science Review Panel. The Central Valley Water Board will make all decisions in a public forum.

Stakeholder and Technical Advisory Group (STAG): Responsible for providing productive input representing the range of different interests in the Delta nutrient management strategy development process.

The STAG is an *ad hoc* group of stakeholders interested in and affected by the development and implementation of the Delta nutrient management strategy effort. The STAG serves as the group that will provide stakeholder input and recommendations on technical, policy and implementation issues. In that role, the STAG will also focus on the review and comment of technical work products from the Science Work Groups and Water Board staff. The Central Valley Water Board will seriously consider all recommendations and input received from the STAG. However, the Central Valley Water Board and its staff are not under an obligation to accept or support all stakeholder recommendations or input. All final decisions will be made by the Central Valley Water Board in a public meeting.

All STAG meetings are open to the public and advertised through a Lyris list. STAG meetings may be held in various formats including in-person, virtual web-based meetings, and /or conference call settings. STAG meetings are convened by Central Valley Water Board staff on an as-needed basis to provide input at key points in the process. Attendance lists, agenda, meeting summaries and all documents considered at STAG meetings will be posted no later than two weeks after the meeting on the Central Valley Water Board web site at:
http://www.waterboards.ca.gov/centralvalley/water_issues/delta_water_quality/index.shtml

Science Work Groups: Scientific Work Groups will be formed to provide advice on whether nutrient controls are needed in the Bay-Delta. Initial groups will provide advice on modeling, effects of nutrients on introduced macrophyte abundance and distribution, effect of nutrients on the abundance and distribution of blue-green algae, and effects of nutrient concentrations, forms and ratios on changes in algal species composition. Additional work groups may be formed, as needed in the future. The Science

Work Groups will be organized by Regional Board staff with input and participation by members of the STAG. The Science Work Groups will be responsible for assistance with the key technical work needed to meet the goals and objectives of the Delta nutrient management process by participating in the preparation of white papers. Science Work Group meetings will be publically announced and open to all who wish to attend, listen and participate. Attendance lists, agenda, meeting summaries and all documents considered at Science Work Group meetings will be posted no later than two weeks after the meeting on the Central Valley Water Board web site at: http://www.waterboards.ca.gov/centralvalley/water_issues/delta_water_quality/index.shtml.

The Science Work Groups may be comprised of:

- Technical specialist staff and administrative support staff from SFEI;
- Technical specialist staff from SCCWRP;
- STAG Members; and/or
- Regionally recognized, topic-specific Technical Advisors from:
    - Academia
    - Regulatory agencies
    - Local, State, and federal agencies and/or agency partnerships.

Facilitator: Responsible for third party neutral facilitation for certain aspects of the process. The facilitator shall:

- Serve as a professional and neutral facilitator, assist in preparation of meeting agendas, manage dialogue in meetings, and oversee the provisions of this Charter;
- Design, implement and refine (as needed) Ground Rules and Governance documents that includes a consensus-seeking process;
- Ensure that all points of view held by process participants are heard and that the interests of each participant's constituencies are considered;
- Provide assistance to participants requesting help with communications; and
- Memorialize and distribute meeting discussions and outcomes in a neutral and unbiased manner.

Independent Science Review Panel: Responsible for providing independent review and critique of technical documents as requested by Regional Board staff with input from the STAG. The Panel shall endeavor to provide a robust and effective peer review function. Panel members shall have no relationship with or interest in Delta nutrient process outcomes and will not make final decisions, per se. Their role is to provide expert input and recommendations. The Central Valley Water Board and other process participants will seriously consider all recommendations and input received from the Panel. However, the Central Valley Water Board staff is not under an obligation to accept and support Independent Science Review Panel recommendations or input. In such instances, Central Valley Water Board staff shall provide their rationale in writing for not supporting Panel recommendations and shall provide opportunity for discussions in a public setting.

5.0 Nutrient-related Concerns in the Delta

The following list of potential nutrient-related concerns has been raised by parties involved in Delta issues. The above described effort to assess the need for nutrient objectives and to develop appropriate policies and an associated program of implementation requires an understanding of the effectiveness of

nutrient management and the role and management of other factors and environmental variables in addressing these concerns. Research is needed to address the scientific information and hypotheses associated with each of these concerns and to evaluate management effectiveness. Initial research will focus on the first four issues due to funding constraints.

- Excessive macrophyte growth in certain areas of the Delta
- Proliferation of *Microcystis* and other nuisance species of blue green algae and bacteria in certain areas of the Delta
- Changes in algal community composition from diatoms to other species
- Potential effects of changes in nutrient concentrations and ratios on the Delta ecosystem (changes in species composition and abundance at each trophic level, changes in food quality independent of changes in species composition, changes in biogeochemical processes, invasive species introduction and proliferation)
- Potential effects of nutrients on drinking water supplies (nuisance algal blooms, taste and odor episodes, algal toxin production, filter clogging algae, disinfection byproduct formation potential)
- Effects of nutrients on episodically low dissolved oxygen conditions in specific areas of the Delta and
- Development of a robust computer model to understand the effects of changing nutrient concentrations, forms and ratios and to predict the outcome of future management decisions

The above list may be augmented to include other major nutrient related concerns raised during development of the Delta nutrient management strategy.

6.0 Studies Initiated by the Central Valley Water Board

The Central Valley Water Board has received contract funds for white papers describing the primary physical and environmental factors, including nutrients, responsible for determining the abundance and distribution of macrophytes and blue green algae. Both papers will also identify information gaps that will need to be better understood before conclusions can be reached as to whether nutrient management might be beneficial in the Delta. Execution of these two contracts preceded formation of the STAG.

Two additional white papers are also proposed. The first concerns modeling and would include a generic list of the types of questions a computer model might need to address in the Delta and would also summarize the characteristics of successful candidate models. The modeling white paper would be used to help select a nutrient related model for development and use in the Delta. A second white paper will evaluate the evidence that changes in the forms, concentrations and ratios of nutrients have resulted in changes in algal species composition and abundance in the Delta. No funds have been identified for developing the last two white papers. Central Valley Water Board staff will, with help from the Science Work Groups, take the lead on the preparation of both these white papers. Draft white papers will be available in the spring of 2015 for review by the STAG, Science Work Groups and the Independent Science Review Panel. Central Valley Water Board staff will evaluate all comments and amend the white papers as appropriate.

The four white papers will be used to identify future research needs in support of the goals and objectives for the overall process. The research needs will be summarized in the 2015 Nutrient Research Plan and presented to the Central Valley Regional Water Quality Control Board and Delta Stewardship Council.

7.0 Schedule

The schedule for this work is laid out in the 2014 Delta Strategic Work Plan.

- **2014-2015** – Central Valley Water Board staff and Science Work Groups will prepare draft and final white papers for use in developing the 2015 Nutrient Research Plan. Draft white papers and a draft Nutrient Research Plan will be available for review by the STAG, Science Work Groups and the Independent Science Review Panel.
- **2015** – Central Valley Water Board staff will present the final nutrient study plan to the Central Valley Water Board and Delta Stewardship Council for their review and comment and begin soliciting funding to carry out the studies.
- **2015-2017** – Carry out the nutrient related studies.
- **Winter 2017** – Central Valley Water Board staff will write a recommendation's report, after consultation with the STAG and Science Work Groups, summarizing the new information and evaluating whether nutrient management strategies can effectively address water quality in the Delta. The Independent Science Review Panel will be asked to review the results of all nutrient white papers, studies and the conclusions of the recommendations report.
- **Spring 2018** – Central Valley Water Board staff will present the conclusions in the recommendations report, along with the comments of the Independent Science Review Panel, to the Central Valley Water Board and the Delta Stewardship Council and request direction on next steps.
- **Summer 2018** – If the Central Valley Water Board determines that nutrient objectives or other policy changes are needed, then Central Valley Water Board staff will develop study plans and a schedule for obtaining the remaining information for the associated regulatory process and Basin Plan Amendment. The schedule will include a date for presenting a draft nutrient Basin Plan Amendment (if needed) to the Central Valley Water Board for adoption.

It is recognized that additional funding will be required to address (a) research needs identified in the three white papers and (b) white papers and research needs associated with the other nutrient issues of concern (noted in Section 5.0). Central Valley Water Board staff is preparing a fact sheet and budget estimate to assist in the funding solicitation. Stakeholders have stated their willingness to support the effort to obtain adequate funding for the overall process.